MONTHY LETTER OF THE BUREAU OF ENTOMOLOGY
UNITED STATES DEPARTMENT OF AGRICULTURE

Number 197 September, 1930.

COTTON INSECTS

B. R. Coad, in Charge

Professor N. S. Scherbinovsky, principal entomologist of the Commissariat of Agriculture of the Union of Socialistic Soviet Republics, Moscow, Russia, spent September 17 and 18 at the field laboratory at Tallulah in studying investigations of cotton insects. He expressed great admiration for the magnitude of the operations carried on and the excellence of the equipment, and for the fine spirit of cooperation pervading the organization.

S. Sawa, Osaka, Japan, was a visitor at the laboratory on September 25. He expressed enthusiastic admiration of the laboratory's equipment and organization and the progress made in developing methods for control of cotton insects, especially by dusting with airplanes.

Temporary field assistants whose appointments terminated in September are J. T. Roy, R. J. Groover, E. F. Knipling, H. L. Teer, S. F. Davis, Geo. M. Webb, W. C. O'Dowd, E. V. Welch, H. D. Tate, K. H. Smith, H. R. Johnson, M. C. Ewing, D. H. Allen, jr., L. E. Turberville, M. C. Brunson, jr., L. H. Stubblefield, H. B. Tittle, T. F. Henderson, H. T. Rainwater, and J. M. Landrum.

INSECTS AFFECTING MAN AND ANIMALS

F. C. Bishopp, in Charge

F. C. Bishopp returned to Washington September 17, after an extended trip through various western States to gather data concerning insects affecting cattle, and ticks and mosquitoes affecting man.

W. G. Bruce, of the field laboratory at Fargo, N. Dak., has been transferred to Dallas, Tex., for the fall and winter. He reached Dallas September 18, and will continue work on cattle grubs in Texas.

Dr. W. B. Johnson, Director of the Medical and Sanitary Service of Lagos, Nigeria, visited the Washington office September 25, to confer on problems in medical and veterinary entomology in the United States.

TAXONOMY

Harold Morrison, in Charge

Dr. Filippo Silvestri, Director of the Royal School of Agriculture at Portici, Italy, spent much of his time from September 6 to September 10 working on insects in the collections, with various specialists of the Bureau. He was particularly interested in termites, Zoraptera, coccids, and various myrmecophilous and termitophilous forms. Two collecting trips were made during his stay, one with Doctor Chapin, to locate living specimens of Zorotypus hubbardi Cdll., the other with Mr. Barber and Doctor Snyder, to search for specimens of Micromalthus, Machylis, and Spirobolus, upon which he has uncompleted manuscripts.

E. E. Blanchard, Entomologist of the Department of Agriculture in Argentina, who has been attending the Pan American conference on agriculture recently held in Washington, visited the Division of Insects September 22 and subsequently.

P. H. Timberlake, of the Graduate School of Tropical Agriculture and Citrus Experiment Station, Riverside, Calif., arrived in Washington on September 16, and plans to remain for the winter, working on the classification and identification of coccinellid beetles. Special attention will be given the Koebele collection of specimens belonging to this family, which has been shipped to him in Washington from the Hawaiian Sugar Planters' Station.

Miss Elizabeth von Löben Sels, a graduate student at Cornell University, spent portions of the time from September 2 to September 10 in the taxonomic unit, in consultation with Dr. A. G. Böving about the larva and pupa of the beetle Phalacrus politus Melsh., which she had reared as a feature of a study of the insects of the New England aster.

On September 6 Dr. C. P. Custer, of Baltimore, Md., called at the Museum to see the National collection of bees of the genus Coelioxys. For several years he has been observing the habits of some of the species of this genus occurring in Colorado, and he has in progress a revision of the North American species.

Dr. H. W. Allen, of the Bureau's field laboratory for the study of parasites of the oriental fruit moth, at Moorestown, N. J., came to Washington on September 12 to obtain identifications of hymenopterous parasites reared in connection with studies of this moth.

On September 13 J. M. Valentine, of the University of North Carolina, called at the section of Coleoptera to obtain information about a blind cave beetle which he had collected in West Virginia. It proved to be a new species of Carabidae.

On September 15 Dr. M. W. Blackman returned to Washington from his summer's field work, and he is again carrying on his work on bark beetles at the National Museum.

Wilson Popenoe, of the United Fruit Company, located in Honduras, called to consult with Mr. Heinrich on September 17.

L. A. Carruthers, of the South Dakota State College, recently visited the section of Coleoptera.

Alan Nicolay, of Montclair, N. J., spent September 22 examining types of beetles in the Casey collection of Coleoptera.

Ernest Shoemaker, of Brooklyn, N. Y. recently visited the section of Coleoptera.

Dr. R. W. Leiby, of the North Carolina State Department of Agriculture, called at the Division of Insects on September 27.

H. D. Loring, of the Natural History Society of Cincinnati, Ohio, recently called at the Museum to see the National collection of Coleoptera.

Frank Johnson, of New York City, spent September 30 consulting with Dr. William Schaus, in the section of Lepidoptera.

CEREAL AND FORAGE INSECTS

W. H. Larrimer, in Charge

A general conference on the European corn borer was held at Toledo, Ohio, September 24 and 25. The meeting this year was in many ways more comprehensive and instructive than such meetings have been in the past, although rainy weather interfered considerably with the original plans. Information was released on the status of the borer for the present season, including spread and abundance. Detailed reports were given on the various phases of research. There was the usual large attendance, representing farmers, business and banking interests, manufacturers of agricultural machinery, and State and Federal officials. A complete report of the conference will be available later.

W. B. Cartwright has returned from the Orient, where he spent the last two and one-half years collecting and forwarding to the United States parasites of the European corn borer. It will be remembered that C. A. Clark reported to Mr. Cartwright in Japan in September, 1929, in order that he might become familiar with the parasite work before taking charge of the work initiated by Mr. Cartwright. After clearing up several questions regarding the parasite work, Mr. Cartwright will resume charge of the field laboratory at Sacramento, Calif.

FOREST INSECTS

F. C. Craighead, in Charge

Dr. F. C. Craighead spent the week of September 8 at Asheville, N. C., and vicinity, conferring with R. A. St. George and R. W. Caird regarding the studies being conducted there this season on the southern pine beetle.

At the request of Col. D. C. Chapman, Chairman of the Tennessee Great Smoky Mountain Park Commission, Doctor Craighead and Mr. St. George visited several parts of the Smoky Mountain National Park on September 10 and 11, investigating extensive outbreaks of the southern pine beetle. What is believed to be one of the largest outbreaks in recent years was found in that park. Of particular interest was an outbreak of this beetle found in spruce. This is the first record for this host in many years. Many local outbreaks in pine were found in various localities in western North Carolina and in eastern Tennessee.

Dr. E. J. Kraus, of the University of Chicago, accompanied by Mr. Ashby, a physiologist from England, visited the United States Entomological Laboratory, at Bent Creek, near Asheville, N. C., during the week of September 8, and consulted with Doctor Craighead, Dr. Carl Hartley, of the Bureau of Plant Industry, and Messrs. St. George and Caird, regarding the problem of interrelation of blue stain and beetles in recently infested pines.

The studies on the pine beetle at Asheville were brought to a close on September 24. Mr. Caird left for Ann Arbor, Mich., where he is to continue his postgraduate studies in physiology, forestry, and entomology, at the University of Michigan. He was recently awarded a Pack Fellowship.

On September 15 H. J. Huckenpahler, Field Assistant, returned to the University of Minnesota, at the termination of his summer appointment at Asheville, N. C.

Hugo Pawek, summer Field Assistant, has received a temporary appointment with the Appalachian Forest Experiment Station, at Asheville, N. C., beginning at the termination, on September 26, of his appointment with the Bureau.

In August F. P. Keen made an inspection of the National Forests of Washington. He did this to familiarize himself with insect conditions in this portion of the territory assigned to the United States Entomological Laboratory opened at Portland, Oreg., in October, 1929. Heavy damage by insects was found in various forests. The Douglas-fir tussock moth has killed thousands of acres of fir on the Colville National Forest, and the mountain pine beetle is causing severe damage to the pines both east and west of the Cascade Range.

J. A. Beal has been spending the field season at Klamath Falls, Oreg., studying the effect of various methods of slash disposal upon populations of bark beetles. He has found that piled slash breeds nearly four times as many beetles as that scattered on the ground and exposed to the sun.

W. J. Buckhorn and two summer assistants, Noel D. Wygant, from Purdue University, and Alexis T. Kornouhoff, of the Oregon State College, have just completed the annual survey of the pine beetle in southern Oregon. Records have been kept for 10 years on 30 plots of one square mile each to determine the annual loss through attacks by the beetle, the effect of control work, and the relation of losses to climatic conditions. The surveys have shown a total loss during the past 10 years of 14 p.

The latter part of July was spent by J. C. Evenden, of the forest-insect field laboratory at Coeur d'Alene, Idaho, in checking the results of control projects instituted last spring on the west side of Glacier National Park, and in examining areas containing new outbreaks. The results obtained by the control projects were very gratifying, as only a few newly infested trees could be found within the areas covered by control. Examination revealed several serious situations that will require control measures during the fall of 1930 and the spring of 1931.

Mr. Evenden has just returned to Coeur d'Alene from central Idaho, where he examined outbreaks of Dendroctonus monticolae Hopk. (mountain pine beetle) within the stands of lodgepole pine in that region, as well as infestations by the tussock moth in the fir forests. Though large areas of timber have been destroyed, the outbreaks of the tussock moth (Hemerocampa pseudotsugata McD.) have been successfully reduced through the activity of beneficial insects. In some areas there was a little feeding by this moth in 1930, but it is believed that the epidemic in all areas is at an end.

A. L. Gibson, of the field laboratory at Coeur d'Alene, with three assistants, is making an insect survey of the Beaverhead National Forest, in Montana. This survey is projected on a 10-year basis, to obtain data as to the spread and development of epidemics of Dendroctonus montioclae in lodgepole pine. The infestation in the Beaverhead Forest is being fed from a severe outbreak on the Bitterroot and Salmon Forests to the north.

Donald DeLeon, of the field laboratory at Coeur d'Alene, has been located at Metaline Falls, Wash., during the season, where he is making an intensive study of all insects found in association with Dendroctonus monticolae in white pine. The purpose of this study is to determine what insects contribute to the prevention of epidemics of Dendroctonus, in the hope that artificial control can be so directed as to take full advantage of such agencies.

Contributions from the Gipsy-Moth Laboratory

The Gipsy-Moth Laboratory will move to new quarters at 1156 Main Street, Melrose Highlands, Mass., on October 15. The new location is about one-half mile from the present quarters at 17 East Highland Avenue, and can be as easily reached by railroad or by electric car from Boston. The buildings on the new site are constructed of cement blocks, and consist of two main structures and garage stalls. The largest building is being made ready for use as a laboratory, and some of the insectary buildings belonging to the laboratory have already (September 30) been moved to land adjacent to the new quarters.

Visitors to the Gipsy-Moth Laboratory in September included Saul Phillips, Conservation Commission, Albany, N. Y., and Dr. E. A. Richmond, Brockton, Mass., September 5; J. T. Ashworth, Deputy in Charge of State Gipsy-Moth Work, Danielson, Conn., September 11; M. H. McIntyre and N. R. Trafton, Maine Department of Agriculture, September 12; Dr. F. Silvestri, Portici, Italy, September 15; and W. P. Duryee, Secretary, New Jersey Department of Agriculture, and R. P. Currie, Bureau of Entomology, Washington, D. C., September 16.

C. W. Collins and C. F. W. Muesebeck attended a meeting at the Bartlett Tree Research Laboratories, Stamford, Conn., on September 8.

C. E. Hood and J. V. Schaffner, jr., spent September 23 and 24 in the vicinity of Boothbay and Pemaquid, Me., making observations on the occurrence of the so-called spruce webworm, Epinotia nanana Tr.

C. F. W. Muesebeck and J. V. Schaffner, jr., visited certain portions of Maine, New Hampshire, Vermont, and Massachusetts on September 29 and 30, for information relating to studies on a leaf-mining sawfly, Phyllotoma nemorata Fall., infesting birch.

TRUCK-CROP INSECTS

J. E. Graf, in Charge

R. E. Campbell, in charge of the field laboratory at Alhambra, Calif., reports that Dr. N. S. Scherbinovsky, Commissariat of Agriculture of the U. S. S. R., Moscow, Russia, visited the field laboratory at Alhambra on September 2, 3, and 4.

F. S. Chamberlin, of the field laboratory at Quincy, Fla., visited Washington in the early and the latter parts of September, for conference with Bureau officials.

Dr. Rodney Cecil, Alhambra, Calif., gave a talk on the Mexican bean beetle at the regular quarterly meeting of the Southern California Entomological Club, held at the Los Angeles Museum on September 19.

F. H. Shirck has been transferred from Toppenish, Wash., to Parma, Idaho, and K. E. Gibson has been transferred from Walla Walla, Wash., to Toppenish, Wash.

Probationary appointments to the several grades named have been given W. C. Cook, Entomologist, Davis, Calif., G. T. York, Junior Entomologist, Riverside, Calif., and W. B. Hollingsworth, Junior Entomologist, Picayune, Miss., who have been assigned to duties at the addresses stated.

DECIDUOUS-FRUIT INSECTS

A. L. Quaintance, in Charge

E. H. Rawl, Horticultural Agent for the Louisville & Nashville Railroad, Montgomery, Ala., visited the field laboratory at Cherryfield, Me., on August 29. L. S. McLaine, of the Entomological Branch, Ottawa, Canada, visited the same laboratory on August 20.

G. F. Moznette, in charge of investigations of pecan insects, attended the twenty-ninth annual convention of the National Pecan Association, held at Jackson, Miss., September 23, 24, and 25. While there he presented a paper on "How some factors limit efforts for artificial control of the pecan nut case-bearer in the Southeast."

Contributions from the Japanese-Beetle Laboratory

On September 11 Dr. Filippo Silvestri, of the Royal Institute of Agriculture, at Portici, Italy, visited the laboratory. He was much interested to learn of the progress of the work of introducing parasites of the Japanese beetle since his first visit to this institution, in August, 1928. A large part of his brief visit was spent in an interesting discussion of the principles underlying introduction of parasites.

On September 29 C. S. Beckwith, of the New Jersey Agricultural Experiment Station, visited the laboratory to discuss with Dr. Fleming methods of fumigation of blueberries for the Japanese beetle.

STORED-PRODUCT INSECTS

E. A. Back, in Charge

Erskine M. Livingstone was appointed Junior Entomologist, September 18. He graduated last June from the Clemson Agricultural College, S. C., and will assist W. D. Reed in the investigation of insects affecting cured tobacco, with headquarters at 515 Jefferson Street, Danville, Va.

On September 5 C. K. Fisher, of the bean-weevil field laboratory at Modesto, Calif., began the annual check on the infestation of the bean crop as delivered in the warehouses in California. The hearty cooperation of warehousemen and State and County agents is being extended to Mr. Fisher, as in the past. The percentage of infestation for 1930 promises to be very low as compared with that of previous years.

During September S. E. McClendon investigated conditions regarding the corn weevil in Louisiana.

A. O. Larson reports that examinations made in one 40-acre field in Oregon, planted for the third consecutive year in field peas, showed that 91½ per cent of all peas produced were weevily. He estimates that in this field 47,000,000 adult weevils were left behind in the stubble after harvest. While this is an extreme case of infestation, it is sufficient to indicate the interest of northwestern farmers in the investigations on the pea weevil, of which Mr. Larson assumed charge July 1.

William G. Hamilton resigned as Field Agent on September 3.

TROPICAL, SUBTROPICAL AND ORNAMENTAL PLANT INSECTS

A. C. Baker, in Charge

C. P. Clausen, who has been in the Malay Peninsula and Dutch East Indies since the spring of 1929, collecting parasites of the citrus black fly, arrived in the United States September 17, with several cases of material. He spent September 18 and 19 in Washington, conferring with Bureau officials in regard to this work.

P. A. Berry came to Washington on September 24 for conference in regard to the parasite work in Cuba. He returned to Cuba on September 26, taking with him some of the parasite material brought by Mr. Clausen.

Dr. Emily W. Emmart has been appointed Assistant Entomologist, and assigned to study the morphology and histology of the Mexican fruit fly as it develops under different environmental conditions. Her headquarters will be at Mexico City, where she reported for duty September 22. Dr. Emmart recently received her doctor's degree from Johns Hopkins University.

In September the resignations of Sheppard A. Watson, Paul M. Scheffer, Arthur J. Haas, Theodore R. Hansberry, Clayton H. Huff, R. P. Buckner, John M. McEwen, and Lorin C. Fife, Field Assistants, became effective.

BEE CULTURE

Jas. I. Hambleton, in Charge

H. H. Root, of Medina, Ohio, visited the Bee Culture Laboratory September 4, and interviewed the members of the staff in regard to the progress of various research problems.

The vice-president of the Apis Club, an international organization of apiculturists, Jean Chaneaux, of Les Arsures (Jura), France, visited the laboratory September 18 and 19. Mr. Chaneaux stopped at Somerset at the conclusion of a ten months' visit to beekeepers of the United States. In this time he visited practically every important beekeeping State, and had personal interviews with many of the commercial beekeepers of the country.

J. E. Eckert, Associate Apiculturist of the Intermountain Bee Culture Field Laboratory, Laramie, Wyo., spent several days at the Bee Culture Laboratory, conferring with various members of the staff in regard to his work on the flight range of the honeybee, and consulting the literature in the beekeeping library.

While in Washington recently, A. W. B. Kjosness, general manager, and O. Lende, counsel, of the Mountain States Honey Producers' Association, conferred with the members of the Bee Culture staff and other Government officials in the Department of Agriculture.

W. E. Anderson, State Entomologist of Louisiana, who has charge of the State apiary work, visited the laboratory on September 27.

Dr. W. E. Dunham, of the Ohio State University, Columbus, who has been employed temporarily as Field Assistant, working on the problem pertaining to the use of honeybees in the pollination of red clover, stopped at the laboratory on September 24 to discuss various phases of his summer's work.

Dr. O. W. Park, Research Apiculturist of the Iowa Agricultural College, Ames, has been appointed a collaborator.

Russell Smith, Winfred L. Martin, Harry W. Roath, Seymour E. Bailey, and Miss Alice Mayo have terminated their appointments as temporary Field Assistants.

Harry H. Laidlaw, jr., has been appointed Minor Scientific Helper, and assigned to duties at the Southern States Bee Culture Field Laboratory, Baton Rouge, La., and William C. Northrup has been appointed Assistant Scientific Aid, for service at the Intermountain Bee Culture Field Laboratory, Laramie, Wyo.

LIBRARY

Mabel Colcord, Librarian

NEW BOOKS

Artschwager, E. F.
Dictionary of biological equivalents. German-English. 239 p. Baltimore, Williams & Wilkins Company, 1930.

Beeson, C. F. C.
The biology of the genus Xyleborus, with more new species. 33-96 p., 2 pl. Calcutta, Central Publication Branch, 1930. (Indian Forest Records. Entomology Series, v. 14, pt. 10.)

Blair, K. G.
The Indian species of Palorus Muls. (Coleoptera: Tenebrionidae) and some associated beetles. 20 p., plate. Calcutta, Central Publication Branch, 1930. (Indian Forest Records. Entomology Series, v. 14, pt. V.)

Borchert, Alfred.
Die seuchenhaften Krankheiten der Honig-Biene, von Dr. Alfred Borchert . . . 3. neuarbeitete Auflage . . . 96 p., illus. Berlin, R. Schoetz, 1930.

Boston Society of Natural History.
The Boston Society of Natural History 1830-1930. [Edited by Percy R. Creed.] 117 p., plates (ports.). Boston, printed for the Society, 1930. [Cover title, Milestones 1830-1930.]

Bristol, University of. Agricultural and Horticultural Research Station.
Annual report, 1929. 227 p., illus. Bath, Chronicle and Herald Press, 1930. (P. 93, Tutin, F. Further observations on pyrethrum spray fluid; p. 96, Tutin, F. Examination of plants for insecticidal principles-I; p. 101, Walton, C. L., and Staniland, L. N. Tar-distillate washes as a control for the apple capsid bug: Field experiments, 1929; p. 115, Walton, C. L. The raspberry and loganberry beetle and its control. Some experiments with a pyrethrum emulsion spray; p. 124, Staniland, L. N., and Walton, C. L. Experiments on the control of pear midge (Contarinia pyrivora). (Progress report.)

Burleson, W. L., and Nolan, A. W.
Farm crop projects. 458 p., illus., New York, Macmillan, 1930.

California Spray-Chemical Company.
Handbook of pest control. By R. K. Vickery and A. C. Broune. Nine sections separately paged [loose leaf]. Watsonville, Calif., California Spray-Chemical Co., 1929.

Castle, W. E.
Genetics and eugenics. A text-book for students of biology and a reference book for animal and plant breeders. Ed. 4. 474 p., illus. London, Humphrey Milford, Oxford University Press, 1930. (Bibliography: I, 1920, p. 407-441; II, 1920-1924, p. 442-457; III, 1924-1930, selected list, p. 458-467.)

Comstock, J. H., Comstock, A. B., and Herrick, G. W.
A manual for the study of insects. Rev. ed. Ed. 19, 401 p., illus. Ithaca, N. Y., Comstock Pub. Co., 1930.

Costa Lima, A. da.
Supplemento ao 2° catalogo systematico dos insectos que vivem nas plantas do Brasil e ensaio de bibliographia entomologica brasileira. O Campo, v. 1, No. 7, p. 38-48, July, 1930. [Suppl. to his Catalogo publ. in Archivos Escola Sup. Agr. e Med. Vet., v. 8, 1927.]

Eggers, Hans.
On the genus Xyleborus. Part IX. Neue Xyleborus-Arten (Coleoptera: Scolytidae) aus Indien. 32 p. Calcutta, Central Publication Branch, 1930. (Indian Forest Records. Entomology Series, v. 14, pt. 9.)

Elton, C. S.
Animal ecology and evolution. 96 p. Oxford, Clarendon Press, London, H. Milford, 1930. (References, p. 93-96.)

Fisher, R. A.
Statistical methods for research workers. Ed. 3, rev. and enl. 283 p., illus. Edinburgh, Oliver and Boyd, 1930. (Biological Monographs and Manuals No. V.) (Sources used for data and methods, p. 273-275. Bibliography, p. 276-280.)

The Gardener's Year Book 1929. Edited by D. H. Moutray Read. 318 p., illus. London, Philip Allan & Co., Ltd. [1929.]

Georgia State Board of Entomology.
Bulletin No. 71, 31 p. [p. 23-31 are plates I-XIV]. Atlanta, Ga., State Capitol, January, 1930. (Alden, C. H. Peach insects and diseases and how to control them.)

Handbuch für den praktischen Entomologen. Allgemeine Biologie . . . bearb. Gustav Lederer. I. Abt. Lepidoptera. B. Spezieller Teil. II. Band. Tagfalter (Diurna). 172 p. Frankfurt am Main, 1921. III. Band. Sphingidae, Castniidae, Zygaenidae, Syntomidae, Arctiidae, Lymantriidae. 172 p. Frankfurt am Main, 1923.

Harukawa, Chikichi, and Kumashiro, Saburo.
Studies on the seed-corn maggot, Hylemyia cilicrura Rondani, in Japan. I. On the seasonal life-cycle and habits of the seed-corn maggot. Berichte des Ohara Instituts für landwirtschaftliche Forschungen in Kuraschiki. Bd. IV, Heft 3, p. 372-382, pl. XXXII, 1930. (Literature cited, p. 382.)

Hottes, A. C.
The book of perennials. Ed. 3. 200 p., illus. New York, A. T. De La Mare Co., Inc., 1930.

Hustache, A.
. . . Insectes coléoptères XIX. Curculionidae, p. 367-560, illus., pl. X-XI. Paris, P. Lechevalier, 1929. (Voyage de Ch. Alluaud et R. Jeannel en Afrique orientale (1911-1912). Resultats Scientifiques, fasc. 19.)

Linderer, Erwin.
Die Fliegen der palaearktischen Region. Lfg. 45-46. Stuttgart, E. Schweizerbart'sche Verlagsbuchhandlung, 1930. (Lfg. 45, 4. Bibionidae. p. 1-75, illus.; Lfg. 46, 11 u. 12, Culicidae, p. 193-256, illus.)

Macdougall, R. S.
The warble flies of cattle. Transactions Highland Agricultural Society of Scotland . . . Ser. 5, v. 42, p. 75-112, illus. 1930.

Mace, Herbert.
Bee matters and beemasters . . . with an appendix, Who's who in beekeeping. 144 p., front., illus., plates, map, diagrs. Harlow, Essex, The Beekeeping Annual Office, 1930.

Mader, Leopold.
Evidenz der paläarktischen Coccinelliden und ihrer Aberrationen in Wort und Bild. p. 1-144, illus., 35 [i.e., 36] pl. [Vienna, 1926-27.] Reprint from Zeitschrift des Vereines der Naturbeobachter und Sammler, Bd. 1-2, 1926-1927.

Michaelsen, J. W., and Hartmeyer, R.
Die Fauna Südwest-Australiens. Ergebnisse der Hamburger südwest-australischen Forschungsreise 1905. Bd. 5 (Schlussband). 596 p., 122 figs., 1 map, Jena, Gustav Fischer, 1914.

Neues Handbuch der tropischen Agrikultur, von G. Arnold, H. V. Costenoble, Karl Ettling, W. Hoffmann, u. a. Lfg. 18-21. Hamburg, Tropenverlag Fr. W. Thaden. [n.d.]

Pagden, H. T.
A preliminary account of three rice stem borers. 30 p., illus., col. pl. Kuala Lumpur, Federated Malay States, 1930. (Dept. Agr. Straits Settlements and Federated Malay States. Scientific Series No. 1.) [Discusses Diatraea auricilia Dudg., Schoenobius incertellus Walk., and Sesamia inferens Walk.]

Pan American Union.
Selected list of publications on tropical agriculture . . . prepared for the Inter-American Conference on Agriculture, Forestry and Animal Industry, September 8-20, 1930. 90 p. Washington, D. C., Pan American Union, 1930. (Mimeographed.) [P. 84, Economic entomology.]

Pierce, F. N., and Metcalfe, J. W.
The genitalia of the group Tortricidae of the Lepidoptera of the British Islands. An account of the morphology of the male clasping organs and the corresponding organs of the female. 101 p., XXXIV pl. Oundle, Northants, F. N. Pierce, 1922.

Porta, Antonio.
Fauna coleopterorum italica . . . v. 1-3, illus. Piacenza, Stabilimento Tipografico Piacentino, 1923-29.

Pratt, J. G.
Professional copying for the amateur. Photo-Era Magazine, v. 65, No. 3, p. 138-142, illus. September, 1930.

Ramakrishna Aiyar, T. V.
A contribution to our knowledge of South Indian Coccidae (Scales and mealy-bugs). 73 p., illus., plates (partly colored). Calcutta, Central Publication Branch, 1930. (Imperial Institute of Agricultural Research, Pusa. Bulletin 197.)

Royal Society of South Australia.
Transactions and proceedings. v. 53, 1929. Adelaide, published by the Society, printed by Gillingham & Co., Ltd., 1929. (P. 203-244, Lea, A. M. Notes on some miscellaneous Coleoptera, with descriptions of new species. Pt. VII; p. 264-266, Moulton, D. An interesting new thrips from Australia [Carconothrips leai, n. sp.]; p. 297-308, Turner, A. J. New Australian Lepidoptera;

p. 309-346, Girault, A. A. Notes on, and descriptions of, Chalcid wasps in the South Australian Museum; p. 347-352, Elston, A. H. Australian Coleoptera, Pt. VI.)

Sterneck, Jakob von.

Prodromus der Schmetterlingsfauna Böhmens, von Dr. Jakob Sterneck . . . 297 p., map. Karlsbad, Druck der "Rota" a. g., 1929. [Bibliography: P. 1-32; 249-256.]

Thompson, W. R.

The biological control of insect and plant pests. A report on the organization and progress of the work of Farnharm House Laboratory. 124 p., illus. London, His Majesty's Stationery Office, 1930. (Empire Marketing Board Publications E. M. B. 29.)